MATERIALS:

* small coffee can or jar
* plastic wrap
* scissors
* straw
* index card
* rubber band

PROCESS:

1. Tightly cover the top of the coffee can with plastic wrap, using a rubber band to hold the plastic wrap in place.

2. The cover should be tight making the can airtight.

3. Place the straw horizontally or sideways on the plastic wrap so that two-thirds of the straw is on the can.

4. Tape the straw to the middle of the plastic wrap so that it will not fall off.

5. Tape an index card to the can or jar behind the straw. The straw will act as a pointer on the card.

6. Carefully record the location of the straw on the index card with a pencil. If desired, marks can be drawn on the index card to make observing the changes easier, like in the image above.

7. After 15 minutes, record the new location of the straw on the index card. Continue checking and recording the straw location as often Mrs. Herrington says.

Information:  
Low Pressure: The plastic wrap will rise. The straw will fall.   
High Pressure: The plastic wrap will sink. The straw will rise.

Questions:

1. In a low pressure, what happens to the air molecules?

2. In a high pressure, what happens to the air molecules?

3. What type of weather might we expect under a high pressure system?

4. What type of weather might we expect under a low pressure system?

5. Compare the cloud in a bottle lab to this lab in terms of molecules of air and how they are affected by pressure.   
In the Cloud in a Bottle Lab \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
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In the Barometer Lab \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
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6. If the straw moves upward, what type of pressure change are you seeing?

7. If the straw moves downward, what type of pressure change are you seeing?

8. How do air molecules act when they are under a low pressure?

9. How do air molecules act when they are under a high pressure?

EXPLANATION:

High pressure will make the plastic cave in and the straw go up. Low pressure will make the plastic puff up and the straw go down. If possible, check your measurements with a real barometer.